IN THE CLAIMS

1. (previously presented) A synchronization detecting apparatus making synchronization detection by using a pilot signal that comprises a plurality of bits and at least one bit of said plurality of bits is used as a synchronization signal, comprising:

a channel estimating unit making channel estimation by using the pilot signal from which a predefined part of the pilot signal is removed; and

a synchronization signal demodulating unit demodulating said at least one bit of the synchronization signal by using a result of the channel estimation, wherein

said predefined part is defined for each target bit of the synchronization signal to be demodulated and is defined so as to include the target bit; and

synchronization detection is made by using the demodulated synchronization signal.

2. (previously presented) The synchronization detecting apparatus according to claim 1, wherein

said predefined part is a slot including the target bit of the synchronization signal.

3. (previously presented) The synchronization detecting apparatus according to claim 1, wherein said channel estimating unit divides signal bits used for channel estimation into groups, and said predefined part is a group including the target bit of the synchronization signal.

4. (previously presented) The synchronization detecting apparatus according to claim 1, wherein said predefined part is the target bit.

5. (previously presented) The synchronization detecting apparatus according to claim 1, wherein said channel estimating unit also serves as a channel estimating unit for demodulating data.

6. (previously presented) The synchronization detecting apparatus according to claim 1, wherein said channel estimating unit makes weight coefficients, which are applied to a process result of each slot, different from weight coefficients for data demodulation, which are used at the time of channel estimation, when making the channel estimation.

7. (original) The synchronization detecting apparatus according to claim 1, wherein weight coefficients, which are applied to each slot at the time of channel estimation, are varied according to reception quality information obtained from a reception quality estimating circuit.

8. (original) The synchronization detecting apparatus according to claim 1, wherein weight coefficients, which are applied to each slot at the time of channel estimation, are varied according to a fading speed obtained from a fading frequency estimating circuit.

9. (previously presented) The synchronization detecting apparatus according to claim 1, wherein synchronization detection is made by setting at least one parameter of parameters for synchronization detection, which comprise a parameter indicating a number of error-tolerable bits of the synchronization signal, a parameter indicating a number of backward guard stages, and a parameter indicating a number of forward guard stages, according to a state of a propagation path wherein the state is indicated by at least one of reception quality

information obtained from a reception quality estimating circuit, a fading speed obtained

from a fading frequency estimating circuit, and a number of pilot symbols.

10. (previously presented) The synchronization detecting apparatus according to claim

1, wherein synchronization detection is made by using an output of a path having a largest

correlation value among outputs of a RAKE receiver of a code division multiple access

receiving device.

11. (previously presented) A synchronization detecting method for synchronization

detection by using a pilot signal that comprises a plurality of bits and at least one bit of said

plurality of bits is used as a synchronization signal, comprising:

performing channel estimation by using the pilot signal from which a predefined part

of the pilot signal is removed; and

demodulating the at least one bit of the synchronization signal by using a result of the

channel estimation, wherein

said predefined part is defined for each target bit of the synchronization signal to be

demodulated and is defined so as to include the target bit; and

synchronization detection is made by using the demodulated synchronization signal.

12. **(new)** A synchronization detecting apparatus making synchronization detection of

a signal comprising a plurality of slots by using the signal having a pilot signal that includes a

synchronization signal within each slot, comprising:

a channel estimating unit making channel estimation by using, from the signal having

the plurality of slots, the pilot signal with the synchronization signal removed in the slot to be

demodulated, and using the pilot signal having the synchronization signal in another slot

other than the slot to be demodulated; and

a synchronization signal demodulating unit demodulating the signal having the

synchronization signal in the slot to be demodulated by using a result of the channel

estimation, wherein

the synchronization detection is made by using the demodulated synchronization

signal.